REMARKS

In the Office Action, the Examiner rejected claims 25-29, 31-36, 60, 64-68, and 70 - 73 under 35 USC 103 and claim 63 under 35 USC 112. The rejections are fully traversed below.

Claims 25, 63 and 66 have been amended. Claims 74-84 have been added. Claim 60 has been canceled. Thus, claims 25-36 and 61-84 are pending in the application. Reconsideration of the application is respectfully requested based on the following remarks.

ISSUES UNDER 35 USC 112(2)

Claim 63 has been rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The rejection has been overcome by the amendment made above.

The Examiner asserted that the Applicant has not disclosed that MYLAR solves any stated problems or is for any particular purpose. The Applicant disagrees in that this information was provided in the previous response. As stated therein, MYLAR is a thin and light weight material as opposed to the shock absorbing material 300 of *Chee*. As mentioned in the background, the present invention is trying to prevent unnecessary mass, volume, and expense as these are undesirable traits that go against the current trend to make portable computers cheaper, thinner and lighter. Furthermore, it is a material that can be used in electronic devices. Accordingly, the rejection is unsupported by the art and should be withdrawn.

ISSUES UNDER 35 USC 103(a)

Claims 25-28, 31-36, 60, 65-68, 70 and 73 have been rejected under 35 U.S.C. §103(a) as being unpatentable over *Nakajima* (US 5,715,139) in view of *Shih* (US 6509981).

Although claims 25 and 66 have been amended, it should be emphasized that this was done to expedite the prosecution of the case. It is still believed that these claims should be

allowed for the reasons indicated in the previous response. For example in reference to claim 25, neither reference teaches or suggests "an enclosureless drive" let alone "...an enclosureless optical drive having drive components and frame components configured to support the drive components, the frame components taking the form of a skeletal system..." In addition, neither reference teaches or suggests, "...the casing and chassis having interior portions that define an enclosed region inside the base...the enclosed region being arranged to surround a substantial portion of the enclosureless optical disc drive so as to shield the enclosureless optical disc drive from internal and external hazards capable of passing through the skeletal system of the frame components."

In contrast to both references, amended claim 25 (and its dependents) specifically requires, "...the enclosed region formed by the casing and the chassis being the only housing structure arranged to surround a substantial portion of the enclosureless optical disc drive..." As mentioned throughout prosecution, both of these references disclose the redundant double box and therefore they do meet the claim limitations recited above. Particularly, that the enclosed region is the only housing structure that surrounds the drive, and that the housing structure is formed by portions of the casing and chassis of the computer. Accordingly, the rejection is unsupported by the art and should be withdrawn.

In *Nakajima*, the FDD 50 is encased in casing 51 and the casing 51 is surrounded by portions of the portable computer thereby forming a double box. The FDD 50 including its own casing 51 are shown in Fig. 11 and described in Col. 8, lines 54-64, which states, "...the FDD 50 has a box-shaped casing 51..." The portions that surround the FDD 50 including the casing 51 are also shown in Fig. 11, but described in Cols. 9 and 10, lines 66-24, which states, "The FDD 50... secured to the lower housing 5 by means of a frame 70....the frame 70 comprises an FDD supporting section 71... The FDD-supporting section 71 is a rectangular, shallow open box. It is made of a left side wall 74a, a right side wall 74b, a bottom wall 75 connecting the walls 74a and 74b, and a rear wall 76 connecting the rear ends of the side walls 74a and 74b. The walls 74a, 74b, 75 and 76 define a recess, in which the FDD is fitted...the FDD 50 is completely contained within the FDD-supporting section 71. The upper surface of the FDD 50 is covered with a shield plate 78." As shown, the FDD 50 is redundantly surrounded by both the casing 51 and the walls 74, 75, 76 and 78 and therefore *Nakajima* does not meet the above mentioned claim limitation.

In *Shih*, the moveable housing 3 is disposed inside the fixed housing 2 and the fixed housing 2 is mounted into a floppy bay within a computer thereby forming a double box. *Shih* states, "the media access device 1 comprises a fixed housing 2 mountable into a floppy bay within a computer...a moveable housing 3 being moveably disposed within the fixed housing 2...(Col. 2, lines 32-36)." As should be appreciated, mounting a fixed housing 2 into a floppy bay of a computer creates a double box, i.e., the fixed housing 2 encloses the media access device 1 (including the moveable housing 3), and the floppy bay of the computer encloses the fixed housing 2. It should be emphasized that although *Shih* is silent on these matters, the media bay of the computer must include walls that define the media bay otherwise the media bay would exist in free space and it wouldn't be called a "bay". When the fixed housing 2 is mounted in the media bay, these walls surround the housing 2 thereby creating a double box. Even if the media bay is not a full enclosure, the enclosure of the computer is a full enclosure. As such, when the fixed housing 2 is mounted in the computer, the walls of the computer surround the fixed housing 2 thereby creating a double box and possibly a triple box depending on the design of the media bay.

As mentioned throughout prosecution, the present invention is trying to avoid a double box. Up to the point of this invention, drives including CD/DVD drives had their own enclosure that fully contained the components of the drive. The drive enclosure was installed into a slot in the base of a portable computer in order to connect it to the portable computer. As discussed in the background of the present invention, this technique unfortunately leads to redundant features. That is, the drive components of the drive are disposed inside a double box, i.e., an enclosure inside an enclosure, and therefore they have double features that serve the same purpose (redundant). As should be appreciated, when installed inside the base of the portable computer, the walls of the drive enclosure and the walls of the base both surround the components of the drive. As further stated in the background of the present invention, "While double protection may sound good, the double box tends to add unnecessary mass, volume and expense to the portable computer. These are undesirable traits that go against the current trend to make portable computers cheaper, thinner and lighter. The extra layer of material may also inhibit the dissipation of heat from the drive components..."

The present invention tries to overcome these disadvantages by utilizing an enclosureless optical drive and an enclosed region formed by the housing of the portable computer. By enclosureless, it is meant that the drive does not include its own housing and thus it is thinner,

lighter and cheaper than conventional drives. While the optical drive of the present invention may not include a housing, it does include frame components that consist of structural members that support the drive components. The frame components typically take the form of a skeletal system and therefore there are many openings surrounding the drive components. These openings may allow the passage of undesirable electronic emissions and unwanted loose particles (dust) and therefore the enclosed region is thus configured to house the enclosureless optical disc drive thereby overcoming these problems.

Also in contrast to both references, amended claim 66 (and its dependents) specifically requires, "the frame components being fixed to the casing or chassis in order to secure the drive in place within the enclosed region." *Nakajima* is completely silent to frame components, and *Shih* fails to disclose fixing the movable housing 3 to the fixed housing 2. As should be appreciated, because it is moveable, it is not fixed thereto. Accordingly, the rejection is unsupported by the art and should be withdrawn.

Although the rejections to the dependent claims 26-28, 31-36, 65, 67-68, 70 and 73 should be withdrawn for at least the reasons as above, it should be noted that they offer additional language that is unsupported by the art. For example:

In contrast to both references, claim 27 specifically requires, "wherein the casing includes a plurality of casing walls and wherein at least one of the casing walls forms a wall of the enclosed region." In *Nakajima*, it is the FDD supporting section 71 that defines a recess in which the FDD 50 is fitted. It appears that no portion of the housing 5 forms a portion of the FDD 50 containment. In *Shih*, it is the fixed housing 2 not the walls of the computer enclosure that form a slot for the moveable housing 3. It appears that no portion of the computer forms a portion that immediately surrounds the moveable housing 3. Accordingly, the rejection is unsupported by the art and should be withdrawn.

Also in contrast to both references, claim 34 specifically requires, "...wherein the enclosed region shields laser emissions."

Also in contrast to both references, claim 36 specifically requires, "wherein the CD/DVD drive is a slot loaded CD/DVD drive."

Also in contrast to both references, claim 65 specifically requires, "wherein the top, bottom, front and first side walls are formed by the casing, and the back and second side walls are formed by the chassis." Again, neither reference teaches using the overall enclosure to define a portion of the enclosed region. Even if they did, they are completely silent as to which walls or that multiple walls are formed from a single structure. Accordingly, the rejection is unsupported by the art and should be withdrawn.

Also in contrast to both references, claim 67 specifically requires, "...wherein the frame member includes a base member and a top cover, the combination of which leaves the one or more openings, the base member being configured to support the internal components of the optical drive and the top cover being configured to cover a portion of the internal components of the optical drive, the base member including a base portion and side portions extending therefrom, the side portions including a flange portion for receiving a bottom surface of the top cover." No such structure is disclosed in either reference. The Examiner is respectfully urged to make a showing of such a structure to maintain the rejection.

Claims 29, 64, 71 and 72 have been rejected under 35 U.S.C. §103(a) as being unpatentable over *Nakajima* as modified by *Shih* as applied to the claims above, and further in view of *Chee* (US 6,324,054).

The rejections to claims 29, 64, 71 and 72 should be withdrawn for at least the same reasons as above. That is, *Chee* does not overcome the deficiencies of *Nakajima* and *Shih*. All the references fail to teach or suggest "...the enclosed region formed by the casing and the chassis being the only housing structure arranged to surround a substantial portion of the enclosureless optical disc drive..." as required by claim 25 from which claims 29 and 64 depend and "...the frame components having one or more openings that leave at least a portion of the internal components of the optical drive exposed...the enclosed region being dimensioned to surround the peripheral regions of the optical drive so as to cover at least the exposed portions of the optical drive and to shield the optical drive from internal and external hazards...," and "the frame components being fixed to the casing or chassis in order to secure the optical drive in place within the enclosed region." as required by claim 66 from which claims 71 and 72 depend

Even though this is the case, it is still believed that *Chee* fails to disclose "a thin flexible boot configured to surround at least a portion of the enclosureless optical disc drive so as to

prevent particles from reaching the drive components," as required by claim 29 as well as "...a flexible sheath for surrounding at least a portion of the optical drive in order to prevent dust and loose particles from reaching the internal components of the optical drive wherein the thin flexible sheath is sized to fit over the frame components so as to cover exposed portions of the optical drive," as required by claim 71.

While *Chee* may disclose a shock absorbing material 300, *Chee* does not teach or suggest a thin flexible boot or a boot that prevents particles from reaching the drive components. For one, *Chee* is silent to preventing particles from reaching the drive components via the shock absorbing material 300, i.e., the disc drive apparatus 200 already includes a housing 202. For another, the absorbing material of *Chee* would not prevent particles from reaching drive components as it includes openings for allowing particles to reach the drive. *Chee* states, "...The shock absorbing material has openings 302...(Col. 4, lines 47-48)." For yet another, the shock absorbing material is used to prevent shocks and vibrations and thus it seems a certain thickness is needed, and weight is of no concern (e.g., formed from rubber). As should be appreciated, this goes against the trend in portable computers (thin and light). For example, MYLAR typically has a thickness on the order of 1 to 7 mils (0.023-0.18 mm), and more particularly between about 1-5 mils (0.023-0.13 mm) while the shock absorbing material has a thickness ranging from 30 to 500 mils (see Col. 4, line 60). Accordingly, the rejection is unsupported by the art and should be withdrawn.

With regards to claims 64 and 72, the shock absorbing material does not cover exposed portions such as the sides, top, bottom and backside of the drive. As should be appreciated, the shock absorbing material 300 includes opening 302 and thus it does not cover portions of the sides, top and bottom of the drive. Accordingly, the rejection is unsupported by the art and should be withdrawn.

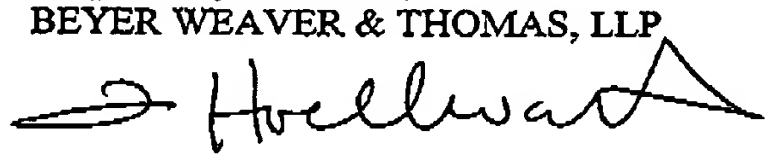
Allowable Subject Matter

New independent claim 84 includes the limitations of independent claim 25, and allowed dependent claim 30. Claim 30, 61, 62 and 69 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.

SUMMARY

Applicants believe that all pending claims are allowable and respectfully requests a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,
BEYER WEAVER & THOMAS, LLP



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